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Amdt. dated May 5, 2004
Response to Office Action of February 24, 2004

PATENT

Amendments to the Specification:

Please replace the paragraph starting with "Referring to FIGURE 14" beginning on page 10, lines 26-30 and ending on page 11, lines 1-21, with the following amended paragraph:

Referring to FIGURE 14, in order to determine the orientation of the intensity gradient, each filter element in a 3 x 3pixel unit is designated by V (x, y) where x is (i -1) , (i) or (i + 1) while y is (j - 1), (j) or (j + 1). Element V(i, j) is defined to be a center element and is located in the middle row and the middle column. dl is an amount of intensity change in the left direction with respect to the central V (i, j) element. Similarly, dr is an amount of intensity change in the right direction with respect to the central V (i, j) element. ~~dr~~ du and dd are each an amount of intensity change respectively in the up and down directions with respect to the central V (i, j) element. In summary, the following are defined:

$$dl = |V(i - 1, j) - V(i, j)|$$
$$dr = |V(i + 1, j) - V(i, j)| \qquad (1)$$
$$du = |V(i, j - 1) - V(i, j)|$$
$$dd = |V(i, j + 1) - V(i, j)|$$

Then, a maximum of the above four values is determined. If the maximum is either dl or dr, it is determined that the intensity gradient is in a horizontal direction near the central V (i, j) element and the vertical-stripe sensitive interpolation filter coefficients are used to substantially reduce the undesirable effects of abrupt intensity gradients. On the other hand, if the maximum is either du or dd, it is determined that the intensity gradient is in a vertical direction near the central V (i, j) element and the horizontal-stripe sensitive interpolation filter coefficients are used to substantially reduce the undesirable effects of abrupt intensity gradients. In case the abrupt intensity gradient or stripes has slanted orientation in an image, the use of either the horizontal-stripe sensitive or vertical-stripe

sensitive interpolation filter coefficients still results in some undesirable effects such as some moire.